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CONTENTS

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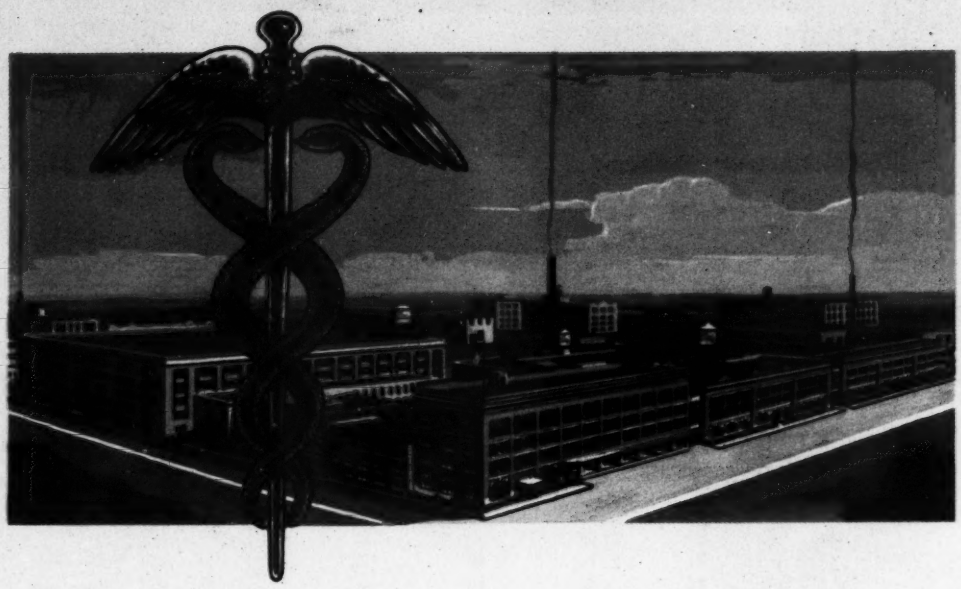

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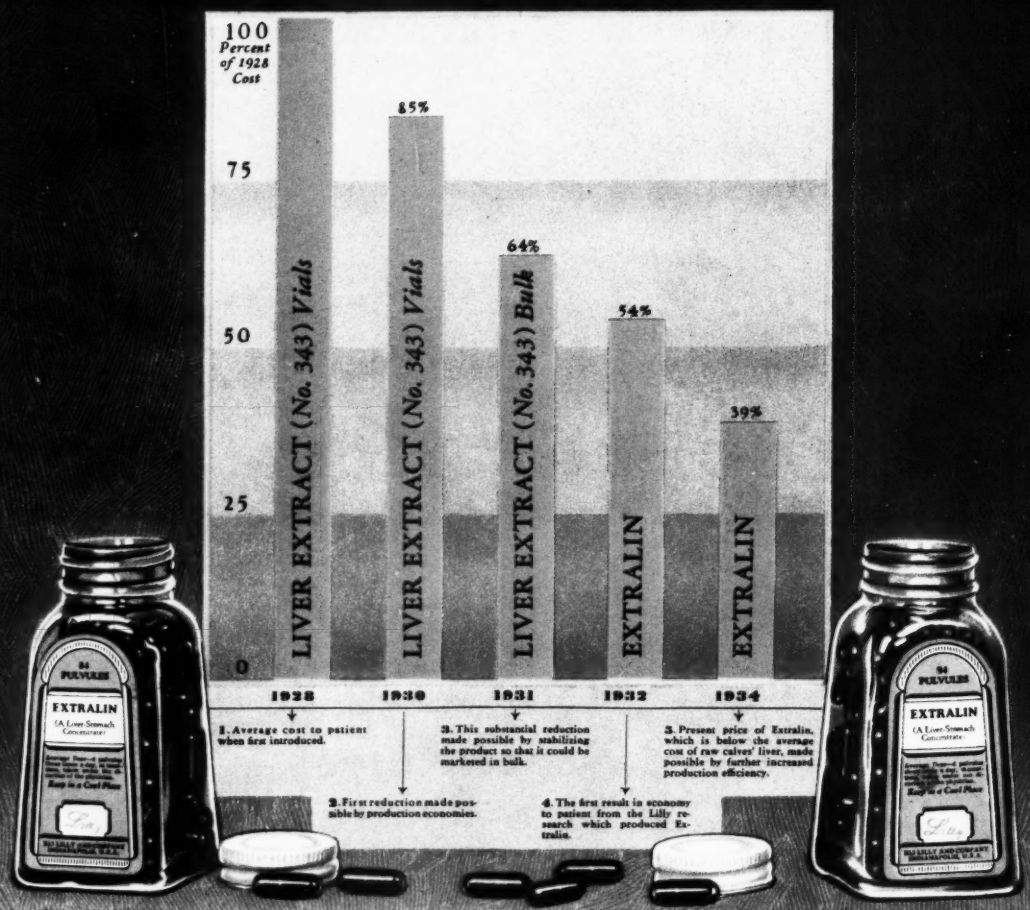

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MEDICINE: PAST AND PRESENT*

ALFRED STENGLE, M. D.
Philadelphia, Pa.

DR. ALFRED STENGLE: Mr. President, ladies and gentlemen, this formidable title may suggest to you that I intend to attack you with a historical review, going back to the Middle Ages or ancient time; but that is not the purpose. It intrigued me to consider and think how it might interest you to compare the medicine of today and the medicine that I personally remember in my earliest days as a medical student, which is just about fifty years ago.

I am not going quite so far back as Dr. Dean Lewis who spoke of the time when Joseph Lister was a young surgeon walking in the wards of the hospital in Edinburgh. That was about 1865. A little while before he introduced his celebrated "antiseptic surgery" that has created modern surgery and so many other things, as Dr. Lewis has pointed out to you. But going back to the days when I was a student, I recall, for example, a surgeon, one of my teachers, who operated in the old amphitheater every operating day through the three years in the same old blue woolen coat, and when he finished his day's operations he hung his coat on a peg outside of the operating room. He prided himself on never having anything—and he always had it—but what he was pleased to call "laudable pus"—the kind of thing Dr. Lewis was referring to in the experiences of Joseph Lister in Edinburgh.

I remember that we had a very distinguished obstetrician, a teacher who in drawing inspiration from the past for his lectures went back to Avicenna and the early Arabians. He had been a contemporary in his earlier days (a younger contemporary) of the celebrated professors who so vigorously attacked Oliver Wendell Holmes when that sage person taught the people, on this side of the world at least, that puerperal fever was due to doctors' dirty hands and dirty gloves, for which he was much reviled, as his predecessor who first made this discovery in Vienna was almost stoned to death.

Then I can recall a teacher who was called a therapeutist, one who deals with the administration of drugs, whose ideas of prescribing drugs were not far removed from some earlier American medical teachers (I recall several of them in Kentucky at the Transylvania Medical School) who gave as much as half a pound of calomel per day to a poor sick patient, and, remarkable to say, once in a while one of them recovered.

Then I used to hear it said, and it was common talk among young medical men in my student days, that one of our surgeons was just as good a doctor as the best of them, just as good a medical man as the best of them, and perhaps it was so, because at that date none of the wonderful advances that have made medicine a very intricate subject had yet been dreamed of, much less developed. And as for surgery, there was no surgeon in that day who really practiced surgery as a specialty. They all practiced medicine as they had seventy-five or eighty years before.

Now, I don't want to give anyone the idea that all medical men at the day I am speaking of were given to the crudities that I have alleged in these instances. There was a younger group of men coming along who were mighty keen, who were seeing the light, and who realized the deficiencies in medicine at that time, but who realized also that they lacked some method of attack which would enable them to take hold of the problems of medicine and push the subject forward.

If you study anything, I don't care whether it is politics or sciences or any other human enterprise, you will find that the advances are made in waves, each period being dominated by the discovery of some way of doing things. Now it is electricity; now, it is a chemical method; now it is an optical method; now it is something

*Address delivered before the General Public Meeting of the Medical Society of Delaware, Wilmington, September 26, 1933.

else. And so the medicine of those days, my early student days, was waiting for what? For some new way, some new method, and fortunately we had not so very long to wait.

The younger men of the day had become interested in the subject of pathology, that great subject which deals with the changes that occur in the body, in disease, and they flirted a bit with the microscope, a novel instrument to many medical men even then, although it had been in common use for some thirty or forty years. This science of pathology that I refer to was probably about thirty years old, at least in its full development, at that time, its real establishment dating from perhaps about 1850. The microscope had been known for one hundred years before that and perhaps a great deal longer than that, but with the exception of that there were no instruments of precision, no instruments that you could call by that name in my day that were in common use.

I recall well as a first year's student seeing the first blood-counting apparatus, a thing which every hospital in the land has and almost every doctor has in his office. The first blood-counting apparatus in Philadelphia, was demonstrated to us students by one of the young instructors—a very wonderful thing he had just gotten. Later on when I was an interne in the hospital it used to be my task to call him to come out to the hospital and make a blood count on some peculiarly interesting patient, a thing that is done now first of all with every patient as he enters the hospital. That was the only blood-counting apparatus that was in Philadelphia for some years.

Then there was another little instrument that came along, by which tracings could be made from the pulse at the wrist on smoked paper—the sphygmograph. And then still another instrument that had come into use about twenty years before but lots of doctors hadn't yet learned how to use this wonderful instrument—that is the clinical thermometer that most of you have at home to put under your tongue and take your temperature. Twenty years or so before the time I speak of that was first put into use. These were all of the instruments a doctor had to work with to find out anything more than what he could find with his ears and eyes and fingers and sense of smell.

What kind of equipment do you suppose a doctor would need, intellectual and physical, to practice medicine at that stage? It was the kind of equipment which I myself saw. As far as the doctor's office was concerned, all he needed was a desk and some chairs. Some of the more up-to-date of them had an examining table on which a patient could be made to lie down and be examined a little more in detail perhaps. The window sill was a sufficiently good place to serve as a laboratory. For many years it was the only laboratory doctors had with a few test tubes and an alcohol lamp, and the very advanced fellows perhaps had a cheap sort of microscope. That was the equipment a doctor had in his office. When he went out he was equipped with a stethoscope, if he was a really up-to-date man and had learned how to examine people physically but if he wasn't altogether an up-to-date man it was enough to feel the pulse and listen to the story and look at the tongue, and a medical diagnosis was made on that basis.

Now, this may sound like a very much overdrawn story of what medicine was within one's lifetime, and yet it is not so very overdrawn at that, and I have picked out things which I have actually seen, and saw many times for that matter, to emphasize the fact that medicine was a very simple thing in those days.

We hear a good deal at present about the high cost of medical care, as Dr. Lewis has just said, and we hear also a good deal about this dreadful specialization which is going on in medicine, and it is partly to come back to those two topics that I have chosen to speak on the subject I am speaking on now. I say fortunately about the time I am referring to we were just on the brink of great discoveries. There were two wonderful Frenchmen, Claude Bernard and Louis Pasteur—Claude Bernard the innovator, the inventor of experimental investigative medicine, the father of them all and the greatest of them all; and Louis Pasteur, originally a chemist, whose discoveries led him more and more into the realm of medical study. Bernard's work, beginning around 1860 somewhat antedated Pasteur's work, but it was soon eclipsed by the Dramatic quality of Pasteur's discoveries and there is a long period of years during which Bernard was practically unrecognized by the medical profession itself because this wonderful new science introduced by Pasteur, bacteriology, ran like wildfire through the world; and

having lived through that period it comes back to me with great force.

It was only a little over a decade before my student days, about 1873, that Pasteur proved to the world—and not without considerable opposition on the part of his contemporaries—what fermentation was due to; that it was due to germs (living things) and not to spontaneous generation as was thought before. From that he readily enough went to the second stage and showed that living germs produced disease, and he first of all investigated and proved that a scourge among sheep in France, anthrax, was due to a living germ. Not only that, but he soon afterwards produced a cure, and then a protection for the sheep against it, and for man as well. After Pasteur and second only to him a German, Robert Koch developed ways of isolating bacteria in "pure culture" and discovered the bacillus of tuberculosis.

After Pasteur's first work and during my early student and professional days, one could hardly pick up a medical journal from one week to the next week without seeing a new disease whose cause had just been discovered. Now it was Friedlaender discovering the cause of pneumonia, and then Fraenkel with another one, and then they discovered the cause of typhoid fever, and before long the germ of erysipelas, and the germ of this and that — a Japanese discovering the cause of lockjaw, etc. So it went on week after week for several years, and then these wonderful explorers of science, not content with having found the germs began to work to see if there might not be some way in which these germs could be made to work to produce antagonistic bodies—that is to say, produce immunity or a cure of the disease which they themselves produced. Out of that grew another science called serology, and we hear of serums for this and that, and vaccines which are a modification, and typhoid fever is almost wiped off the map by protective innoculation. With the antitoxin diptheria has practically been annihilated as a great world scourge; and even tuberculin the first of all of these, which the great German Koch introduced and which in some measure was a failure, was not altogether a failure. Thus we have gone on from one thing to another until infectious diseases are understood.

What did those old teachers of my earlier days and before that know of the causes of disease? What did they tell us about the causes of disease? They spoke of miasms, of the checking of perspiration, of poor ventilation, of putrid odors, and sometimes of the inheritance of humors and diathesis—a lot of metaphysical jargon, and then along came these scientists and put the cause of many diseases squarely on the map.

One young man—you have heard it before and I will not dwell on this at length—had the vision to see an opportunity to use Pasteur's discovery to a most wonderful purpose, and that was Lister. Having read about Pasteur's investigations of fermentation he thought: "Here is the solution of our troubles in our surgical wards and those frightful gangrenous conditions of the wounds of patients operated on," and he introduced Listerism, antiseptic surgery. No longer could a surgeon in an old blue woolen coat go into an operating amphitheater before a medical or a student public, but he must be in spotless white linen, clean linen and still cleaner hands, and finally rubber gloves. Then as this antiseptic surgery made many things possible, the intricacies of surgery grew with marvelous rapidity.

Who dared in those days to go into the abdomen and operate on patients? Who dared in those days to attempt a penetration of the chest in an operative way, much less to think of operating on the very interior of our skulls as the surgeons of the day are doing? The surgeon no longer would be a man who would be "as good a medical man as the best of them." A surgeon of today has to be a surgeon and nothing else if he is carrying on surgery to its highest development.

After Lister's method, making advances possible, other specialties arose. It became possible, for example, by using optical instruments to investigate the interior of the body. There is an instrument by which the operator can look into the interior of the stomach, or the interior of the bronchial tubes, or the interior of any other part of the body that the surgeon chooses to enter, with impunity, revealing the conditions within. That, of course, is a highly developed specialty. No one can learn that out of books. That has to be learned by years perhaps of practice.

After these things had come to pass the world began to remember, the medical world began to

remember, that man Claude Bernard who started to investigate the physiology of the body, and who, as I said, was dwarfed or somewhat put in the background by bacteriology's sudden growth through Pasteur. People began to develop methods to study the physiology of the body, and today the medical man with the methods that he now has is able to make some kind of determination of practically every organ of the body. The heart is studied in the most minute way by an electrical method. The movements within the stomach and within the intestinal tract can be studied by balloon-like mechanisms which they introduce to make tracings on smoked paper on the outside. The functional action of the kidneys and liver and other organs are susceptible of investigation. And medicine has thus become an enormously complicated business.

Now, what has been the effect of this on the practice of medicine? It has undoubtedly had a very profound effect. When people say to you: "Oh, if we only had the kind of doctors we used to have when Mother was young—the good, old family doctor who did everything for us from the cradle to the grave, how nice that would be"—well, how nice would that be? Practically all the things that are possible to do for the alleviation of pain today were outside of the ken of the man of that day, and no one, no matter how skilled or talented, can possibly be encyclopedic enough to master all of the medical branches and divisions. Specialization, therefore, is an absolute necessity. It has come to stay. It should not be treated with contempt and scorn, because, after all, who demands specialization, and most urgently? Perhaps the layman sometimes thinks it is the doctor. I tell you it isn't the doctor; it is the patient, the public. The person who tells you that he wishes to have the old family doctor who did everything for him from the cradle to the grave, if he gets a pain in his eye, rushes off to an eye doctor at once, and doesn't go to the family doctor and ask him about it. Specialization has all kinds of advantages. It is an absolute essential, but it has also possibilities of being frightfully abused, and it is frightfully abused.

What is the way out? The way out is the family doctor, and when people say the family doctor doesn't exist, let me tell you that they don't know what they are talking about. I know plenty of family doctors. To be sure, these family doctors that I am thinking of now wouldn't undertake to do a major surgical operation which the old family doctor never heard of, of course, because they haven't got the apparatus or the skill to do it. They wouldn't undertake an intricate examination of some sort. They wouldn't put a bronchoscope down into a person's bronchial tubes. Of course, they wouldn't. But these family doctors—and I know scores of them—are thoroughly educated men, well trained; they know all there is to know about medicine although they may not be able to do all of the things, and the layman who selects one of this kind and gives him his confidence and uses him as his advisor, will be steered away from a great many extravagances in an unnecessary resort to specialization.

It is the people who rush to the specialist on their own account firsthand, or force it upon the family doctor because the doctor doesn't want to be thought to be jealous or to be obstructive and he yields and says: "All right, if you want to go to a specialist, go." I can't tell you how many scores or hundreds of times doctors have said to me: "Well, this patient wanted to go to so and so, and of course I let him go." They spend a lot of money doing that thing, and it is no use.

The family doctor nowadays is a thoroughly educated man. Medical education is not what it was when I was a medical student. In the first place, they are thoroughly educated before they are admitted to medical classes. In the second place, the medical studies themselves are thoroughgoing. In the third place, this state and most states require that the young man shall spend a year or two in a hospital as a pupil after he has graduated from the medical school. When you get a man who has gone through all that, he is a thoroughly grounded individual, and if he doesn't choose to go into a specialty but chooses to be a family physician, he is the kind of man I would want myself to tie to as my advisor, and if he told me that I needn't worry about that scratchiness in my throat, I would take his word for it; I wouldn't run around the corner and have another doctor look at my throat. If he told me I didn't need this or that, I would take his word for it. Sometimes he may be mistaken; we all may be mistaken, but I think whenever I want advice I

would prefer to go to the person who had made an honest-to-goodness attempt to know all there was about me. And if the man who spends three years in college and four years in a medical school, and two years in a hospital under the best teachers he can find, doesn't know something about what he is trying to do, I don't know where you can find the person who does. My plea, therefore, is for the family doctor, and he is a large part of the way out in this matter of specialization.

Another part is that there shall be a careful study of the patient first, and here I think we doctors are somewhat at fault. We are apt to get a bit lazy, some of us, and we pass on to someone in the laboratory or someone in the x-ray shop, the business of making a diagnosis that we probably could have made with our unaided senses and saved the patient both the trouble and expense, but that is a difficult thing to speak of; it is a difficult thing to rectify. After all, things are turned up by these examinations sometimes that we didn't suspect. But the main thing is that we should give a greater position and greater glory to the family doctor.

PINK PILLS AND PANACEAS*

ARTHUR J. CRAMP, M. D., †
Chicago, Illinois

Mr. Chairman, ladies and gentlemen: I have two titles for this talk, which, by the way, I have shortened considerably in consideration of the late hour—the one that has been given, and another title: "Patent Medicine and the Public Health."

It is recorded that a man went into one of the cheaper restaurants in London and found on the menu something that he didn't understand. He called the waitress over and said: "What is this that I see on the menu here, 'bungalow fluff'?" She said: "Oh, sir, we had that on the menu yesterday as 'cottage pudding,' but it didn't go so well." Now my talk is just "cottage pudding," whether it is given under the fancy name of "bungalow fluff" or under the common name.

I have to preface this talk always with the statement that while I am talking about "patent medicines," there are, for all practical purposes, no such things on the market as patent medicines. That isn't strictly true—there are some medicines that are actually patented, but what we colloquially call "patent medicines" are not patented. They are not patented because they couldn't be. Uncle Sam will not grant a patent, or at least he is not supposed to grant a patent except for a new and useful invention. Those are the essential elements of every patent. What we call "patent medicines," being neither new nor useful, couldn't be patented.

I believe that even if they were patentable, the manufacturers would not patent them, first, because a patent is only good for seventeen years, at the end of which time, of course, anybody can make the product that has been patented, and second, because in order to get a patent, it is necessary for the person applying for that patent to lay his cards on the table face up and tell what he has to offer for the Patent Office to examine. In other words, there is nothing secret about a real patented medicine. But, take away secrecy from what we colloquially call "patent medicines" and the "patent medicine" business will fall to pieces, for secrecy and the mystery that goes with secrecy are the chief assets of the "patent medicine" maker.

I have some slides that I want to show this evening, but before we start with the slides I should like to cover a few general principles that are involved in this talk. You may suppose that the Pure Food Law—the National Food and Drugs Act—is sufficient to protect the public against fraud in "patent medicines"; and I am going to use the term "patent medicines" tonight in the sense that you yourselves use it, the colloquial sense, meaning not a medicine that is patented, but a package medicine, usually secret in composition, put up for the self-treatment of self-diagnosed ailments, and frequently sold under false or fraudulent claims.

The Pure Food Law which went into effect January 1, 1907, does protect the public to some extent against fraud in medicine. It requires, in the first place, that the "patent medicine" maker shall not lie on the trade package. Now, mind you, I didn't say that it required him to tell the truth on the package; there's a difference. But he shall not lie on the trade package. He mustn't make any false or misleading claims for composition or for the origin

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†Director of the Bureau of Investigation of the American Medical Association.

of his product. He mustn't make any false and fraudulent claims for the therapeutic value of his product on the trade package. He may lie to his heart's content in newspaper advertisements and over the radio and on the billboards and on circulars that are distributed, and the National Pure Food Law can't touch him. And that is what he often does. He is little concerned with what he may say on the trade package, which you don't get until your money has gone over the counter. He is greatly concerned, however, with telling you through those avenues of publicity that are without any penalty attached to them, how wonderful his preparation is. I shall show you through the slides some of the changes that have taken place in the actual labeling of "patent medicines" since the law went into effect.

Another thing that the law does is to require the "patent medicine" maker to declare the presence and the amount of eleven drugs that are named in the Act—only eleven out of the hundreds of thousands of drugs that can be used. Some of the most dangerous poisons that we know anything about are not in those eleven drugs. The nostrum maker can put strychnine, or carbolic acid, or aconite, or bichloride of mercury, or a number of other equally deadly poisons, in his stuff, and he doesn't have to declare either the presence or the amount of any of them, but if he does have any one of the eleven drugs or derivatives of those drugs named in the Act, he must declare them on the trade package.

Those are two things on which the present law needs to have its powers extended. It is quite obvious that if the idea of declaring the presence of drugs on the label is to protect the public, then in order to protect the public the manufacturer should be required to declare the presence of every drug in his preparation for which he claims any therapeutic effect. In other words, the layman who doctors himself has the same moral right as the physician who is going to doctor the layman. No physician worthy of the name will give a patient a drug that he knows nothing about, and if the layman is going to be his own doctor, he has the right to know what he is going to pour down his throat. That would seem to be obvious. Therefore, the law should be extended to cover all drugs for which therapeutic action is claimed. The law should also be extended to cover all avenues of publicity. If, to protect the public, the manufacturer is prohibited from lieing on the trade package, certainly it would be more rational to prohibit him from lieing about his product in any place —newspapers, radio, billboards, or anywhere else. And yet, under the present national law, as I have said, there is no control over collateral advertising.

There should further be an extension of the law, although that I can't discuss this evening, to cover cosmetics. Under the present law a drug is defined as a substance used in the treatment or alleviation of disease, and that lets out some of the most dangerous drugs that are used and found in certain cosmetics, because obviously a cosmetic isn't used in the treatment of disease.

I want to show you this evening by slides also some of the angles of the testimonial racket, for that is what it is. Testimonials are one of the mainstays of the "patent medicine" maker. If your neighbor tells you that he has driven a Ford car or a Buick car for so many years and finds it has given excellent service, if he tells you he has a Baldwin piano or a Steinway or Knabe or some other piano that has stood up under severe punishment on the part of the children of the family, if he tells you he has purchased his overcoats from such and such a store for a good many years and found that they give good wear—you are justified in giving due weight to what he tells you, because he knows what he is talking about. But if he tells you that he got up sick one morning and took two bottles of "Peruna" which cured him, you don't have to believe him, because he is not competent to express such an opinion. There are so many factors involved in the treatment of human ailments that it may take a lifetime of study to say with any degree of certainty that a certain drug will cure this disease or benefit that disease.

As every physician knows, about 85 per cent of all of our ailments tend toward recovery. That is where the man who is selling a medicine has the advantage over a man selling a motor car or suit of clothes or piano. If you buy a piano or motor car that doesn't give good service, you have sense enough not to go back and buy a similar car or piano. The manufacturers of all merchandise, except that sold for the treatment of human ailments, have nature working against

them in wear and tear, and they have to "deliver the goods" if they expect to stay in business.

The man selling a medicament has an eighty-five to one hundred shot in his favor to start with, and that is how the testimonial industry is developed. John Doe gets up some morning feeling seedy, and on his way downtown he reads in a "patent medicine" advertisement in his morning paper about a set of symptoms that he thinks he has, and a number he didn't know he had until he read the advertisement, and he is convinced the thing to do is to stop into the nearest drug store and get a bottle of the nostrum advertised. He does so, and in a day or two he is well. Now in all human probability he would have been well anyway, but till the end of time he will maintain that it was the "patent medicine" that cured him, and you never can convince him to the contrary.

It has been part of my work in the last twenty-seven years in investigating medical frauds, to investigate testimonials. In the case of testimonials for cancer cures, it is a rather simple job. All I have to do is wait and I can get the death certificate of the person who gave the testimonial, if he had cancer. With consumption cures the same thing is true. There are in the files of the Bureau of Investigation scores of "patent medicine" testimonials for cancer and for consumption, and with each one is the death certificate of the person who gave the testimonial! Every one of those persons was just as honest and just as sincere as anyone in this hall. They believed that they would be cured, and they wrote the testimonials, and the testimonials are used long after they have been buried. In the case of testimonials for rupture cures and epilepsy cures, you can wait two or three years and write to persons and usually get a reply admitting that they were mistaken. They thought they were cured of rupture but weren't, and they are still ruptured; they are still deaf and a little deafer than they were when they gave the testimonial, and not infrequently say they are now using something that they think will cure them. And in epilepsy cases it is the same thing. But in the larger group cases where you are not dealing with specific conditions, you run up against a brick wall for the reasons already given.

The American people spend about $360,000,000 annually on "patent medicines" — about twice as much money as they spend on physicians' prescriptions and on simple home remedies —official products, such as epsom salt, castor oil, cod liver oil, etc.

(Dr. Cramp then showed a number of slides illustrating specifically the general principles just given.)

CYSTITIS: ITS CAUSE AND TREATMENT*

NEWELL R. WASHBURN, M. D.,
Milford, Del.

Until the past decade the term "cystitis" was a specific entity in the minds of most physicians, characterized by frequency and dysuria, and presumed to designate inflammation of the bladder. In fact most of us today look upon the term as meaning any condition that would favor irritability of the bladder. Therefore, without looking further, treat the patient with urinary antiseptics and bladder irrigations, in spite of the fact that numerous authorities on the subject have investigated large series of cases with the almost unanimous conclusion that cystitis is merely a manifestation of pathology in the genital tract. One author, Lower, states "cystitis is a diagnostic scapegoat." He compares the mucous membrane of the bladder to that of the mouth in which we must have serious and repeated insults due to chronic irritation or lowered resistance before infection gains a foothold. Another author, McBee, says "the genital tract relies on the bladder to make known any existing pathology; it spreads the alarm". Therefore, if we simply treat the bladder symptoms without looking further, we find the condition often becomes worse, due to the fact that the disease is elswhere in the urinary tract. In other words, as Pelouze states, "The bladder is an especially well-behaved organ, singularly indisposed to start any trouble". He analyzes a series of 20 cases and finds the pathology in all of them to be elsewhere in the genito-urinary tract.

Another much used term is "catheter cystitis". Cabot, has shown experimentally that the normal bladder cannot be infected by instilling organisms, and believes that catheter cystitis is due to a weak, boggy bladder wall or to over-

*Read before the Medical Society of Delaware, Wilmington, September 26, 1933.

distention. He advises catheterizing post-operative patients before the bladder becomes distended. Chills and fever after catheterization is usually due to a pyelo-nephritis. Urgency is due to a trigonitis or inflammation of the waterfall area, and urine trickling over this sensitive area causes the urgency.

When confronted with a case of cystitis the first step is to locate the cause, which in most cases will be found somewhere in the genito-urinary system. Rarely the cause is in some remote part of the body; such as bacterial endocarditis, an infected tooth, general debility etc. Still more rarely the trouble will be found in the bladder itself. It will also be found that the pathology in the female is more often above the bladder; that is, in the ureters and kidneys. In the male the trouble is more often below the bladder; that is, in the prostate, urethra and associated organs. A careful examination may reveal in either sex a ureteritis, stricture, contracture of the vesical neck, diverticulitis, congenital malformation polyposis, etc. In the male we may also find seminal vesiculitis, prostatitis, prostatic hypertrophy or malignancy. Likewise in the female we may find a cystocele, old lacerations or disease of the reproductive organs with secondary involvement of the bladder.

We should also keep in mind the fact that gonorrheal infections do not go beyond the trigone, as at this point the epithelium changes, and gonorrhea grows only on ciliated epithelium.

If no definite pathology is found below the bladder, the ureters and kidneys require investigation. Here we may have malformations of the ureteral orifices, stricture, inflammation, or kinks of the ureters, calculi, neoplasms, tuberculosis, pyelitis, pyelonephritis, hydronephrosis, cysts etc.

The resulting cystitis, regardless of its cause, may be classified as acute or chronic, depending on its duration. Also it may be infectious or non-infectious, the latter often being due to trauma, irritating drugs, nervous disorders etc.

An interesting series of bladder tumors in dye workers has recently been reported by Drs. Lang W. Anderson and Victor Washburn. Although it has been known in Europe for some time that there was a tendency toward bladder tumors in dye workers, this is the first time the condition has been discovered in this country. Among the more unusual types of bladder pathology which are very often unrecognized and which involve the deeper layers of the bladder wall are those designated by various authors as submucous cystitis, Hunner's ulcer, elusive ulcer etc. The etiology of this type is not clear, but is probably due either to a long-standing chronic cystitis, to emboli, to a focus of infection in some other part of the body, or to general debility. It is characterized by severe pain and frequency, and as the condition progresses the bladder becomes contracted and scarred and the capacity very small. Culture of the urine usually reveals streptococci or staphlococci or both. Careful cystoscopic examination shows areas of scar tissue and areas of deep ulceration in the bladder wall which tends to bleed if the bladder is distended.

Another condition which may be missed is suppurative pericystitis. This is characterized by infection and often by suppuration of the perivesical region. The cause is usually due to a focus of infection elsewhere in the body. Crabtree reports two cases cured by drainage.

Amoebic cystitis is very rare. Rogers reports a case of apparently true amoebic cystitis.

The term "encrusted cystitis" is used to describe those cases in which there is found to be areas of alkaline encrustations on the bladder mucosa, and the patient at intervals passes calcareous material in the urine. The etiology is probably the result of a stubborn alkaline cystitis. Hoger and McGrath have shown by experiments that a secondary invasion of an alkaline bladder with salmonella ammoniae causes the liberation of an enzyme, urease, which in turn converts urea to ammonia, thus causing an alkaline reaction and the precipitation of the salts of calcium, magnesium and ammonium resulting in the encrustations.

Another unusual bladder complication is "cystitis cystica," characterized by multiple small cysts on the bladder mucosa which are probably the result of inflammation. Microscopically they are found to be epithelial buds and nests with subsequent degeneration of the central cells. A similar condition may be found in the pelvis of the kidney or in the ureter, known respectively as pyelitis cystica and ureteritis cystica.

The condition called "cystitis emphysematosa," in which the bladder wall is studded with

small cysts containing gas is believed by Hueber to be due to the action of enzymes on glucose-producing gas, or to the action of B. coli on the bladder wall. The condition is more often found at necropsy, and in these cases is probably a post mortem change.

Ravich and Katzen report a case of marked cystitis emphysematosa found at operation on a case of diverticulitis. These latter conditions however are unusual and ordinarily not encountered except in rare cases. In the last 15 cases of so-called cystitis which we have encountered on examination, the etiology was found to be as follows: hypertrophy of prostate, 3; cystocele, 2; tuberculosis of the kidney, 1; large pus kidney secondary to nephrolithiasis, 1; interstitial cystitis, 2; laceration due to childbirth, 2; pelvic inflammation with bladder irritation, 2; gravel, 2.

Pelouze reports 20 cases of cystitis and in all of them the pathology was found to be elsewhere in the genito-urinary tract.

When we consider the great number of conditions which may give rise to cystitis, we realize how important it is to determine the underlying pathology before we can proceed with any intelligent form of treatment. Once a definite diagnosis is made the treatment is usually obvious. However, if there is a severe acute cystitis as a result of some underlying pathology such as pyelitis, renal tuberculosis, cancer, cystocele, hypertrophied prostate, stone, etc., it is usually wise to put the patient to bed for ten days until the symptoms of pain and urgency have subsided and the urine clears. Hot fomentations should be applied over bladder and perineum, and opium suppositories and sedatives used as indicated. Potassium citrate, tincture hyoscyamus, sodium bicarbonate are most commonly the drugs given by mouth. Urotropin may be given to tolerance. The more recent products, such as capricol, pyridium etc., have not been found superior to the old standbys. Fluids should be forced. Gentle bladder irrigations of potassium permanganate or boric acid solution, silver nitrate 1:-8000, acriflavine 1:4000, often give very satisfactory results. Also, if the urine is stale alkaline, use ½% acetic acid. Irrigations may be followed by instillations of argyrol 10-20%, neosilvol 10-20%, mercurchrome ½%, if well tolerated. If the patient does not respond well it is advisable to stop local treatment for a period. A soft rubber catheter should be used for irrigations.

As soon as the severe symptoms subside a thorough search should be instituted for the underlying cause. This includes a general examination, and an investigation of the urinary tract. This search is then similar to the procedure followed in cases of the so-called chronic stage.

In the chronic stage we find that the pain and frequency may be absent, probably due to the patients having more or less adapted themselves to the existing condition.

The first step in the treatment of the chronic, or the acute after the serious bladder irritation has subsided, is the thorough examination to determine the etiology. Once it is determined whether it be a pyelitis, a stone, a large prostate, tuberculosis, carcinoma, etc, we treat these existing conditions by appropriate methods. At the same time it is well to continue the irrigations and instillations until the existing bladder pathology has subsided. If there is a pyelitis, it should be treated by bed rest, forced fluids, urinary antiseptics, and in most cases it is wise to catheterize the ureter on the side involved to rule out stricture or stone, and if indicated, a pyelogram should be taken. The same applies to tuberculous cystitis, which we find is almost always secondary to a tuberculous kidney. Here we usually have negative cultures, but the tubercle organisms may be found by staining a centrifuged specimen or by guinea pig injection. If only one kidney is involved and the patient is in good condition, remove the offending organ. If both are involved, the case must receive the usual treatment for tuberculosis. In the treatment of tuberculous kidneys and bladder it has been found that great improvement often occurs when chaulmoogra oil is given by mouth, in capsules of 5 to 10 minim doses.

Large stones in the pelvis of the kidney, in the ureter, or in the bladder, require surgical removal. If there is extensive kidney damage to one side only, the kidney should be removed. Strictures of the ureter usually respond to dilitation. Malformations of the urinary tract may often be remedied by surgery. Malignancy may involve any part of the urinary system, and is treated by surgery, x-ray and radium.

Ureteral kinks or ptosis of the kidney may require surgery. In lesions below the bladder,

probably the most common is stricture, usually the result of an old Neisserian infection. These are treated by passing sounds, or, in severe cases, by internal or external urethrotomy.

Contraction of the vesical neck usually responds to dilatation. Another very common cause of bladder pathology is prostatic hypertrophy, especially when the middle lobe is involved. Here we find a depression in the waterfall area of the bladder and in this cup urine continually standing usually becomes infected, giving a continual irritation and consequently the symptoms of frequency. If the condition persists, we get urinary retention. Needless to say, these cases require immediate attention. Fortunately a large number of them may be relieved, at least temporarily, by the passage of sounds and by irrigations and instillations until the infection has cleared. However, at times the obstruction becomes complete or nearly so, and the bladder becomes distended with a dribbling overflow. At times there may also be infection of the urine in the bladder. In such cases it is usually fatal to suddenly decompress the bladder, due to the upset in the hydrostatic equilibrium in the kidneys, causing such marked congestion that kidney insufficiency and death follows, the kidneys being unable to withstand and readjust to the suddenly lowered pressure. In these cases the urine should either be withdrawn in small amounts every hour or so, or by inserting a hypodermic needle in the clamped catheter and allowing it to drip until the pressure is gradually lowered.

The treatment of gonorrheal complications is not within the scope of this paper, but, needless to say, strictures, acute and chronic urethritis, vesiculitis, etc., may cause chronic bladder symptoms which disappear when these are relieved. Likewise, large stones in the urinary tract should be removed by surgery, and if one kidney is badly damaged, the other being in good condition, the infected organ should be removed. Pelvic pathology in the female, with secondary bladder irritation, usually requires surgical treatment. Geisinger quotes several cases in which pelvic operations were performed when it was later found that the patients had tuberculous or pus kidneys.

The more unusual bladder conditions such as interstitial cystitis, elusive or Hunner's ulcer, encrusted cystitis, ulcerative, gangrenous, encrusted alkaline cystitis, granuloma, or syphilitic, cystitis, animal or vegetable parasites, cystitis emphysematosa, pericystitis, cystitis cystica etc., are not commonly encountered and are unrecognized except by persons familiar with these conditions. The treatment of interstitial cystitis, elusive or Hunner's ulcer, all of which may be the same condition, consist of the general hygenic improvements for the patient whenever possible—rest, fresh air, high calorie diet, the elimination of foci of infection, together with a careful examination of the urinary tract, with the correction of any existing pathology. In general, however, we find little to help us in these cases and are forced to treat the condition as an entity.

Sohmer describes interstitial cystitis under the following types: simple ulcer, ulcerative, gangrenous, alkaline encrusted granuloma etc. Other authorities, such as Hunner, believe that the elusive ulcer or Hunner's ulcer is a specific entity. The treatment, however, is practically the same in all these types. If the condition does not respond to bladder distention, the ulcers should be fulgurated or even resected if necessary, by open or closed operation.

Syphilitic and granulomatous conditions should receive their specific treatments along with the general measures of irrigations and urinary antiseptics. Suppurative pericystitis should be treated by incision and drainage. The treatment of alkaline encrusted cystitis consists first of making the urine acid. Hager advises using lactic acid or whey, or silver nitrate injections into the bladder, followed if necessary by curettment or cauterization of the bladder. In severe cases it may be necessary to open the bladder and remove the encrustations. Denslow reports 5 cases of encrusted cystitis treated by instillations and irrigations, with practically no improvement. One submitted to open operation and was greatly improved.

The more rare conditions such as cystitis cystica and cystitis emphysemotosa are probably never encountered or recognized except by experts, so that little need be said concerning their treatment, since so very little is known concerning their etiology.

CONCLUSIONS

1. Cystitis per se is very rare.
2. The bladder is the watchdog of the urinary tract and makes known any existing pathology.
3. The complaint of frequency and dysuria calls for a general examination of the patient, for an examination of the structures contiguous to the bladder, and for a careful examination of the urinary system.
4. The bladder pathology usually disappears with the removal of some offending condition which may be near to or remote from the bladder.

DISCUSSION

DR. B. S. VALLETT: (Wilmington) Dr. Washburn has covered this subject very well, and there is very little left to say. I think the important thing, of course, in all cases of cystitis is to isolate the offending organism. Young and Colston in a review of about 600 cases at Johns Hopkins found that the colon bacillus was responsible in about 60% of the cases. In approximately two hundred fifty cases this organism was isolated in pure culture. The next offending organisms were the streptococci and the micrococci, which totalled about 200 cases. Then there was a sudden drop, and bacillus proteus and the typhoid groups were responsible for the rest of the cases. Whenever we get a case of cystitis the important thing then is to isolate the organism so that the treatment may be scientific.

There was one point I didn't know whether he mentioned or not, and that was chemotherapy. We find that in the coccal forms neoarsphenamine is a very good drug, and the coccal forms very often affect the kidney where the bladder isn't affected at the time. In other words, the incidence of coccal forms indicated is higher than those in the bladder. The reverse is true of colon bacilli. We find more cystitis due to colon than we do formed in the kidney. So that neoarsphenamine is a very useful drug in coccal forms. In the bacillar forms mercurochrome injections have proven very useful. Now, just how mercurochrome does this we don't know, because it won't kill the bacteria in vitro where it does often kill them in vivo.

Another point in the treatment is the ketogenic diet. At the Mayo Clinic, Clark has found that by changing the urine—raising the hydrogen concentration to around five—many cases of cystitis and pyelo-nephritis are benefited, and the urine can be sterilized in a great many cases.

I just wanted to mention those things in the treatment: the ketogenic diet, and the chemotherapy.

DR. V. D. WASHBURN: (Wilmington) This Washburn family, either near or distant, having interested themselves in urology for both upper and lower Delaware, it is proper, I think, that upper Delaware should take part in this discussion. I regret that I did not have the privilege of reading the paper, and that I was late and only heard the latter part of it. I do want to add one remark in connection with a statement made by Dr. Washburn in the latter part of his paper to the effect that it was not good practice and sometimes actually dangerous to empty a bladder where there had been an actual retention.

We know from actual experience that people do die if we suddenly change the intravesical pressure. He suggested it might be drawn off or an inlying catheter be left and the clip be removed from time to time. I want to bring in at this point that a much superior and much more comfortable procedure for the doctor and the patient is that thing that we call the decompression apparatus, whereby the lower end of the rubber tube is placed just high enough with relation to the level of the bladder so that the urine comes over with each inspiration, and thereby the bladder is emptied gradually, perhaps in a matter of three or four days, and if the doctor is fortunate and skillful in fastening the catheter in and successful in keeping it in for several days, the patient is continually comfortable. The doctor does not have to get out of bed from time to time, or no one actually has to be in attendance to bring about what is undoubtedly a desirable thing.

I want to corroborate what Dr. Vallett said with regard to the desirability or the usefulness of the ketogenic diet in occasional cases of infection of the urinary tract, whether it be in the bladder or, where it is more apt to be, in the entire urinary tract. I don't use it very often; I don't think any of us can, because it is a difficult thing to get established in the average home, and there is where it has to be estab-

lished. You may apply it very well in the hospital, but it has to be carried out over a period of weeks and months. I have been successful in following out the practice referred to by Dr. Vallett by changing the diet, because it has been demonstrated that the ketogenic diet produced bodies in the urine which are markedly antiseptic, actually superior to any antiseptics we may have at our command in the therapeutic field.

I noticed that in the conclusions Dr. Washburn said the cystitis per se is rare. I know that that is said to be so in the literature, and I realize that cystitis independently of infection of the urinary tract above is perhaps unknown. It certainly in my experience is not rare, and this leads me to say that in earlier years it was not an unknown thing for a man or woman to have urinary frequency and pyuria, and to have a long course of irrigations of the bladder on the theory that we were dealing with an inflammation of the bladder. We now know by experience and observation that over and over again this picture does not spell solely inflammation of the bladder. All the symptoms are to be found in the region of the bladder neck, and the real pathology is to be found in pyelitis and the more severe infections of the kidneys. So that today it is becoming the habit and the custom to refer these people for cystoscopic determination of whether or not the infection is really above or rather entirely to be found in the urinary bladder.

I think with one more thing I will close. That is this: I have long since reached the conclusion that the various urinary antiseptics that are to be brought to our doors and found in the market—many of them very expensive so far as every day commonsense usefulness goes, costing six and eight cents a pill—are only occasionally as good or as efficacious as an acidulation of the urine and the every day hexamethylenamine. Perhaps that comes from the fact that I come from a New England ancestry, and this idea of expensive prescriptions doesn't fit either in the patient's pocketbook or mine, but I know that clinically many, many times the cheaper preparation is not only equal but is sometimes superior to the more expensive preparations.

PROPAGANDA FOR REFORM

The Hospital Formulary.—The Council on Pharmacy and Chemistry reports that recently a committee issued a Formulary for the New York Hospital, and that an article by Robert A. Hatcher and Wendell J. Stainsby, which discusses some of the major problems of the Hospital Formulary, is in harmony with the ideals of the Council. According to the article of Hatcher and Stainsby, large hospitals find it necessary to limit the prescriptions of the staff mainly to selected formulas, and this system has tended to promote the use of proprietary formulas, which usually cost much more than official equivalents without corresponding advantage. The formulary of the New York Hospital was prepared by a committee, which invited representatives of every department to present formulas desired for their departments. In every case where a complex formula or a proprietary preparation was desired the advocate of it was requested to present evidence of its superiority over the equivalent official preparation, and unless such evidence was submitted the committee declined to admit the article, or, in a few cases, admitted it with the proviso that it would be deleted unless evidence was presented that would justify its retention in a subsequent edition of the formulary. As indicated in the rules, this does not interfere with the therapeutic study of any proprietary preparation, nor does it prevent the use by any department in the hospital of any substance concerning the superiority of which the staff is so firmly convinced that it is willing to conduct a scientific study of its uses, or to provide it at departmental expense. This plan requires for its fullest success a highly skilled pharmaceutical staff capable of cooperating with the medical staff. The training of men to fill the pharmaceutical positions in such progressive hospitals constitutes at once an opportunity, and a challenge to the schools of pharmacy, for there are few such pharmacists now available. (Jour. A.M.A., December 2, 1933, p. 1802)

The Administration of Thyroxine.—There can no longer be doubt that thyroxine represents the effective iodine-containing hormone of the thyroid gland. One of the puzzling features of thyroxine from almost the outset of its discovery and isolation has been the repeated observa-

tion of the inefficacy or greatly lowered effectiveness of thyroxine when it is administered by mouth rather than intravenously. At first thought one would expect the purified hormone to be quite as potent as an equivalent amount of desiccated thyroid gland. According to observations at Rush Medical College in Chicago by Harington and Salter the physical properties of thyroxine are such as to make it highly probable that the absorption of this substance after oral administration would be inefficient and erratic; the digestion product, on the other hand, possessing as it does a much wider range of solubility, might well be absorbed almost quantitatively. The Chicago clinicians conclude that solubility of the thyroxine compound administered would therefore appear to be important and destruction by intestinal enzymes must be considered; but only future work will determine whether or not some other factor, as yet unknown, is also to be considered. (Jour. A.M.A., December 2, 1933, p. 1805)

The Nichols Sanatorium—In Savannah, Mo. there has been for some years an institution known as the Dr. Nichols Sanatorium for Cancer. It was founded by one Perry Nichols who held a diploma from the University of the South Medical Department, Sewanee, Tenn., 1901, and who died in 1925. The Nichols concern, which, of course, uses the escharotic treatment, is the subject of an article by the Bureau of Investigation of the American Medical Association. According to the statement that has been made for many years, both before Nichols died and since, this has been vaguely described as: " . . . a double compound, about four times the strength of chloride of zinc plaster, or the arsenical or Marsden's paste, and acts with decidely less pain." In fifty-five cases of alleged cures of cancer by the Nichols Sanatorium that were investigated, it was found that all but three of the cases had been diagnosed as cancer, not by independent physicians, but by the Nichols concern itself. In the three patients whose cases were diagnosed as cancer by physicians, no microscopic examination had been made. Many persons, especially those past middle age, who develop benign growths, assume that such growths are cancer and on their own responsibility go to these cancer-cure institutions that advertise that they do not use the knife. There the patient is told that the condition is cancerous; the growth is eaten out with caustics, the wound heals, and the patient goes back to his home a living advertisement for the "cure" of a "cancer" that never existed. (Jour. A.M.A., December 2, 1933, p. 1817)

Hippuran—The Council on Pharmacy and Chemistry reports that Hippuran is a product of the Mallinckrodt Chemical Works, proposed by Swick for intravenous and for oral urography. Its chemical constitution is stated to be sodium ortho-iodo-hippurate. Sodium ortho-iodo-hippurate contains 38.8 per cent of iodine; it is said to be soluble in less than its own weight of water and to be stable in aqueous solution. It was chosen as a promising agent for visualizing the urinary tract, in view of the fact that hippuric acid normally occurs in the urine following the ingestion of benzoic acid, representing a conjugation of benzoic acid with glycine. Usually from 10 to 15 Gm. has been administered by vein in 40 per cent aqueous solution over a period of five minutes. No reactions have been noted except a sensation of generalized warmth, such as has been reported with other products used for intravenous pyelography. With a dose of 30 Gm., occasional vomiting has occurred. By the oral route, diagnostic pictures are reported to have been obtained 90 and 135 minutes after administration, in seven of fourteen cases. As the product has not yet been sufficiently widely employed adequately to determine its value, the Council has voted to defer further consideration of Hippuran until more evidence has accumulated with respect to its clinical usefulness, at which time the product will be examined by the A.M.A. Chemical Laboratory. (Jour. A.M.A., December 9, 1933, p. 1879)

Pyridium Omitted from N. N. R.—The Council on Pharmacy and Chemistry reports that Pyridium, the monohydrochloride of an azo dye of the pyridine series, phenylazo-*a*-*a*-diamino pyridine, was presented by Merck & Co., Inc. for the consideration of the Council in 1928, for use mainly as a urinary antiseptic. The evidence submitted at that time was judged to be unconvincing and the Council declared Pyridium unacceptable. Additional evidence was presented by the firm and, in view of the fact that two similar preparations, Mallophene (Mallinckrodt) and Serenium (Squibb), which

had not been submitted to the Council at that time were being actively exploited, a recommendation that Pyridium be accepted for one year was adopted in April, 1930. In 1931 a new referee was assigned the task of reviewing the old and new evidence on Pyridium. He recommended reacceptance of Pyridium under severely limited claims and the Council adopted this recommendation. In 1932, after an extended investigation of the available evidence, the Council's referee recommended that the acceptance of Pyridium be revoked at once and that the product be declared unacceptable for continued inclusion in New and Nonofficial Remedies as a local, general or urinary antiseptic because claims for its therapeutic usefulness are not warranted by the accumulated evidence. The Council adopted the referee's report and authorized publication of a statement of its consideration of Pyridium. When the Council's report was submitted to Merck & Co., Inc., the firm replied in a carefully prepared and well documented brief which required further consideration by the Council. The thesis of the firm's brief was that Pyridium has become established as a useful remedy. After careful consideration of the material submitted by the firm, the Council concluded that, while Pyridium may have some value as an adjuvant in the treatment of genito-urinary infections, this is a very indefinite, indeterminable property of a substance recommended for its positive value as a urinary antiseptic. The Council decided that there does not appear to be sufficient basis for the formulation of conditions on which to grant a reacceptance of Pyridium and voted to reaffirm its previous decision to omit Pyridium from New and Nonofficial Remedies. (Jour-A.M.A., December 30, 1933, p. 2118)

Azophene (Mallophene) Not Acceptable for N. N. R.—The Council on Pharmacy and Chemistry reports that Azophene (formerly called Mallophene) was presented by the Mallinckrodt Chemical Works, St. Louis, for consideration of the Council as beta-phenyl-azo-alpha-alpha-diamino-pyridine hydrochloride. Examination by the A.M.A. Chemical Laboratory had shown it to be identical with Pyridium. The Council, as a result of extended investigation, declared Pyridium unacceptable for continued inclusion in New and Nonofficial Remedies because the claims advanced for it as a local, general, or urinary antiseptic are unwarranted. Since Azophene and Pyridium are considered identical, and since, to the Council's knowledge, there exist no reports indicating that the former is superior in any way to the latter, the Council declared Azophene unacceptable for New and Nonofficial Remedies because claims for its usefulness as a local, general or urinary antiseptic are unwarranted. (Jour. A.M.A., December 30, 1933, p. 2121)

GESTATIONAL POLYNEURITIS

According to E. D. Plass, Iowa City, and W. F. Mengert, Philadelphia (Journal A.M.A., Dec. 23, 1933), gestational polyneuritis commonly follows or develops concurrently with hyperemesis gravidarum. There is a tendency to explain the symptoms on the basis of hysteria unless a neurologic examination is made, since there are usually no evidences of visceral disease. The cardinal observations include: (1) general weakness, more marked in the legs and in the extensor muscles, (2) sensory disturbances, (3) tachycardia for which no organic explanation can be elicited, (4) marked diminution or absence of the various tendon reflexes and (5) a psychosis of the Korsakoff type. The etiology is unknown, but the disease is variously explained as due to a toxin developed by the conceptus or to a deficiency in vitamin B intake. Pathologic changes in the viscera are scarcely significant, but degenerative changes in the peripheral nerves and spinal cord and petechial hemorrhages in the cerebrum offer an explanation for the neurologic manifestations. The prognosis is poor. If the patient survives the first two weeks, slow recovery usually ensues, but it may never be complete. Treatment is empirical and none too successful. Prophylaxis on the basis of high vitamin feeding offers the best hope for improving treatment. Therapeutic abortion is well advised but the results are frequently disappointing.

Cancer Comment

TUMORS OF THE SKIN

MARION L. H. FREEMAN,*
Wilmington, Del.

The skin is unique in presenting more kinds of tumor than any other organ of the body because of the various types of cells in it. The diagnosis of skin tumors is further complicated by a wide variety of non-malignant dermatological lesions. The types of cells composing the skin and the tumors arising from them may be summarized as follows:

Stratified squamous epithelium—Squamous cell Carcinoma
Hair follicle—Basal cell Carcinoma
Melanoblasts—Nevus and Melanotic Sarcoma
Blood and Lymph Vessels—Angioma
Connective tissue—Fibroma and Fibrosarcoma
Nerves—Neuroma
Sebaceous glands—Sebaceous cyst and Carcinoma
Sweat glands—Adenoma and Adenocarcinoma

All of these types with the exception of neuroma are illustrated in the thirty-nine completed skin tumor records of the Delaware Tumor Clinics.

The two following case histories are taken from these records:

CASE 1—A white male, aged 57 years, presented a small ulcer 1 cm. in diameter on the right side of the bridge of his nose, which he had noticed first after a blackberry thorn had been removed from the site eight months before. The ulcer was red, with indurated edges. There was also an area of dermatitis behind the right ear of six weeks duration, which consisted of a narrow ulceration in the cleft surrounded by an erythematous zone. There was no induration or fixation of the skin to the underlying tissue. A biopsy of the lesion of the nose showed a basal cell carcinoma.

The patient was wearing spectacles with "white gold" frames which came in direct contact with the ulcerated areas, and it was suggested that they be discarded since they appeared to be an irritant. Eight days later the ulcer on the nose showed marked improvement and the lesion behind the ear had healed almost completely.

At this time Fox (J. A. M. A., 101, Sept. 30, 1933, 1066) reported a case of nickel dermatitis in which the eruption disappeared completely in three or four weeks after the use of "white gold" frames was discontinued. Because of the similarity of these cases it was decided to watch the patient for a short time before proceeding with any treatment.

Six weeks later both the ulcer on the nose and the post-auricular dermatitis had completely healed. Since the ulcer was small and the biopsy taken from the clinically most suspicious portion it is possible that all of the tumorous portion of the ulcer was removed at the biopsy.

The question arises whether or not nickel dermatitis is a precurser of basal cell carcinoma, although this point is not brought up by Fox. The case is being followed carefully in the tumor clinic and will be watched for any sign of recurrence.

CASE II—White male, aged 79 years, had a "skin cancer" of the left preauricular region removed by electrodessication. No biopsy was done. The lesion apparently healed. Two years and four months later he appeared at the clinic with a subauricular mass on the same side of the face as the previous lesion. The overlying skin was intact. The mass measuring 4 x 5 cm., together with the surrounding tissue and the overlying skin, was widely excised. Microscopical examination showed a slowly growing radio—resistant carcinoma of sebaceous gland origin, invading the lymph nodes. It is unfortunate that a biopsy specimen of the primary lesion was not taken to complete the evidence of this very unusual tumor. If this had been done the proper form of treatment would probably have been clearly indicated. The metastases were presumably present at the time of the first treatment, over two years ago.

Since the natural history of the low grade carcinomas of the skin is about five years and metastases are slow in developing it is obvious that this patient must be observed periodically for at least five years before he can be considered cured.

*Secretary-technician of the Delaware Tumor Clinics.

The President's Page

TO THE MEMBERS OF THE MEDICAL SOCIETY OF DELAWARE:

I wish to greet you and wish all a prosperous New Year. This may seem routine but I am sincere, realizing full well that we are in that period of a medical economic slump which is present throughout the country. I can safely predict an upturn for the better, however, and feel that when I leave this position we will be able to look back and realize that we overcame the condition, and took care of the people of Delaware from the medical standpoint as if no depression ever existed.

My aims as your president will be:

To bring the members of this Society into one cooperative body, working for the community along those lines which our profession is looked upon to take care of, and to disperse all those petty factional and political angles which are so wont to appear at various times.

To cooperate with the officers of the county societies, and assist them in any way that I can to increase interest and attendance in their respective societies. This, as you all know, is the function of the councilors, and I will likewise assist them in the performance of their duties.

To protect our Society against incringement in any form, and to continue the fight on medical racketeering that has had such success recently.

With these ideas in mind, I am calling on each and every one of you to cooperate, and thus assist me in making this year one of which I can justly feel proud and realize that I have attempted, as your president, to accomplish those things which are for the betterment, individually and collectively, of the Society.

Fraternally,

JOSEPH S. McDANIEL, M. D.

EDITORIAL

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Local news of possible interest to the medical profession, notes on removals, changes in address, births, deaths and weddings will be gratefully received.

All advertisements are received subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.

It is suggested that wherever possible members of the State Society should patronize our advertisers in preference to others as a matter of fair reciprocity.

Subscription price: $2.00 per annum in advance. Single copies, 20 cents. Foreign countries: $2.50 per annum.

VOL. VI JANUARY, 1934 NO. 1

CANCER COMMENT

Under the above caption we are inaugurating a new page of items of interest concerning the cancer control movement in Delaware. The material will be written by Mrs. Marion Freeman, the secretary-technician of the Delaware Tumor Clinics, and will consist of brief educational stories, interesting case reports, statistics, pathological data, news items, and other matters pertinent to the subject. We are under the impression that this cancer page, as a regular feature, is a new procedure in the state medical journals. We hope it may prove profitable to our readers.

The cancer control movement in Delaware is making commendable progress. Five clinics have been established recently, and their operations and the other parts of the Delaware program were discussd at the annual luncheon of the Delaware Committee of the American Society for the Control of Cancer, which was held at the Hotel du Pont, December 22, 1933. Thirty-four members heard the reports of the various committees, and agreed a splendid start had been made, and that enough had been accomplished to warrant the continuation of the plan for cancer control in the State along the present lines.

We have accumulated tentative records of over four hundred cases of cancer by using every source, from remarks made by patients attending clinics, to chance contacts. On two hundred and fifty of these we have complete histories on American College of Surgeons forms. About one tenth of these patients have been seen at the tumor clinics, and progress reports have been obtained from the physician on many more.

Since the estimated number of cases of cancer in Delaware is approximately 800, we have been fortunate in having located over half of them in the short time that this work has been carried on, approximately six months.

Seventy four specimens have been submitted to the tissue diagnosis service since February 1, 1933, and of these twenty-two, or thirty per cent, proved malignant. This service, which is free to any institution or physician recognized by the state, should prove an invaluable aid in the early diagnosis of malignancy. A pathological report on a biopsy specimen will assist the physician in deciding on the proper form of treatment, and is a permanent record to which he can always refer.

The morbidity reports, which should be mailed to the State Department of Health as soon as a diagnosis of cancer has been made, are a great aid in keeping our statistics up to date. It is important that we know the extent of our problem if we are to cope with it intelligently.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely *free* to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages, but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve *you*.

To all our readers and friends THE JOURNAL extends its sincere wishes for a happy and prosperous New Year. What with the AAA, the NRA, the CWA, the PWA, all the way down to the XYZ we already have a noticeable improvement alphabetically; it is to be hoped that the improvement economically will keep pace.

We wish to revise our Directory page as soon as possible. Will all secretaries send us the latest list of officers, delegates, censors, and committees at once? We thank you.

Medical advertising again, and how! We have been regaled for years with that yarn about "all the surgeons of America have been rated, and Dr. Whoozis is the fourth (we believe the latest edition has it the third) finest in America," and we have smiled whimsically at the new one saying: "Mrs. Blank, of Erie, Pennsylvania, wrote to the Mayo brothers about her case, and the Mayos wrote back to her that Dr. Whoozis was the best surgeon in the East for her disease," but such twaddle pales into insignificance beside this gem which arrived in the mail the other day.

PUBLICITY

FROM—

..... Advertising Agency,

....., Florida.

Dr. ...., leading x-ray specialist of ..... and widely known for his research activities on x-ray, is at present recuperating at the ..... Hotel in ....., Florida, from a lingering attack of pneumonia. As proof of his improvement, Dr. ..... has lately reported several catches of game fish.

The pity of it is that the doctor named is a fellow of the A. M. A.; the only excuse for it is that his age is 76.

WOMAN'S AUXILIARY

A Message From Our National President

MRS. JAMES BLAKE

Greetings to one and all:

I wonder—have you ever heard the slogan, "Undertake less; accomplish more"?

Well, Mrs. Alice Ames Winter some years ago wrote a book, "The Business of Being a Club Woman", and I have borrowed her slogan. I do want you all to study this slogan, and try in our work to know what we do know as well as we can, and not merely skim the surface. The "Program" of "Health Education" work under Mrs. McGlothlan is the basis of all our Auxiliary activities, and wise is the state president who will follow the lead, "Undertake less, accomplish more". In every state the program committee is the most important. For the character of an Auxiliary depends upon its working program, and the program depends upon the characters of those who build it; how sincere of purpose they are; how well they understand the needs of their Auxiliary, and the community it serves, and how able they are to meet those needs. Every Auxiliary represents a cross section of community life. Through its membership it contacts one or more of the other groups that perhaps direct the activities of that cross section. It may be a home group, a church group, the social group or even a political group. To each of these groups our doctors' wives are contributing largely from the experiences that have come to them as community leaders, and if their program work in the Auxiliary has been in good hands, they have a wide range of material to offer. Every state and county in our nation is facing problems right now. Please, as Auxiliary members, study *your* side of every question before you move on with the masses. When the dredging crew arrives let us not be the ones who have rocked the boat. The Auxiliary woman of the future must be a woman strong in every sense of the word, not only physically and mentally but morally and spiritually as well.

It is a real pleasure to be sending you our first News Letter, and introducing you to your Press and Publicity Chairman in a friendly way. It is a long time since we said "Goodbye" to our many friends and Auxiliary people in Mil-

waukee, and many of us have had plenty of ups and downs since that day in June. But I am sure the inspiration of an Annual Meeting such as we have placed in our book of memories for Milwaukee will and has been helping many of us. Our state presidents, I trust, are all at work on their own specific plans for the year. Our National Chairmen are all at work helping in every way possible the state and county groups.

I am sure you will all be pleased to know that Dr. Rock Sleyster has been chosen by the American Medical Association as one of our Advisory Council, and Dr. Austin A. Hayden of Chicago has been selected to take the place of Dr. Walsh for the next few years. We are delighted to have these men planning our work with us, and keeping fatherly eyes on us at all times. From experience I know in these rapidly changing times, advice is good for the soul and keeps us out of mischief.

Mrs. J. Newton Hunsberger of Norristown, Pennsylvania is our supply lady this year, and from her you order your Treasurer's Receipt Blanks, your filing cards, if you are using them, and the "Hand Books". She also has charge of the files which Mrs. Freeman was so happy to correct and start on their way. After much discussion it was decided at the Milwaukee Meeting, to allow the filing of the State Membership Cards to be taken over by the individual states and not to keep a national membership file state by state, in the office of the President. States wishing their old filing cards may receive them if they pay the postage for their return. The work of keeping such a file from year to year is enormous, and would require a full time secretary on the job. And in the end it entails a great deal of extra work for the state officers. The membership file *will be kept* by the treasurer as in former years. The treasurer's receipt blanks are our up to date paid up memberships at the end of the fiscal year, and please, County Treasurers, get a good pencil, and write very plainly, and be careful of addresses, along with the correct spelling of women's names. And remember, Mrs. Hunsberger has our supplies, but please fill out her request cards promptly, so we can keep ahead of the game of supply and demand.

MISCELLANEOUS

Vitamin D Milk*

DR. THEODORE F. ZUCKER
New York City

Everyone knows how cod liver oil which formerly was a household remedy of indeterminate repute has of late years become a substance of the greatest scientific interest. All this is due to the discovery that the oil has dissolved in it a very small amount of a very highly active and very useful substance called vitamin D. It is this substance and not the oil itself which has the remarkable property of preventing or curing rickets. Rickets is not a disease of undernourishment but is a particular type of improper calcification of the bones. Let me tell you briefly of the work we have done in the study of this Vitamin D from cod liver oil and of some of the applications that have been found for it.

Since the Vitamin D is dissolved in the oil and the oil is inactive the simplest way of a first rough separation is to turn the oil into soap and extract from the soap the oil material which can not be turned into soap. This is called the non-saponifiable fraction and contains the Vitamin D. By this process, however, the oil is broken up chemically. To save the oil which is useful for many technical purposes it is first extracted with a suitable solvent such as alcohol which dissolves little oil but most of the Vitamin D. Then the alcohol-soluble part is turned into soap and the Vitamin D extracted from it. This concentrates the Vitamin D several hundred times but still contains much impurity. By repeating the extraction with suitable solvents and crystallizing out impurities and washing the product, a preparation can be obtained 15,000 times as potent in Vitamin D as the original oil. This while by no means a pure substance has lost the characteristics of fish oil and when incorporated in foods gives them a good Vitamin D activity without imparting any fishy odor or taste.

Everyone has also heard how sunlight can prevent rickets by creating Vitamin D in the body. When the artificial production of Vitamin D as a laboratory product was attempted by irradiation of certain substances with strong

*An address presented at the Columbia Presbyterian Medical Center, New York City, before The Science Forum of the New York Electrical Society, November 15, 1933.

artificial ultra-violet light, it was found that a product of considerable Vitamin D potency was obtained but it did not have the same properties as the well known Vitamin D from cod liver oil. Dr. Steenbock, one of the originators of irradiated products, then introduced the terms "natural Vitamin D" and "artificial Vitamin D". More recently a form of Vitamin D has been created which much more closely resembles the natural form as found in cod liver oil by irradiating milk. These efforts in the direction of producing artificial Vitamin D by irradiation are very promising and will probably ultimately be very successful. In the meantime, partly as a necessary check on the work with artificial Vitamin D, we have been carrying on our studies on natural Vitamin D. As you can readily see, one of the problems involved is the purification of Vitamin D from natural sources. The principal interest in those studies lies in throwing light on the chemistry and the biological properties of the active substance but in following this objective we have not been unmindful of the possible practical applications. One of these is particularly interesting, namely the production of Vitamin D milk by incorporating cod liver oil concentrate in it.

We could prevent almost all rickets in the entire population if we could get daily into the stomachs of all infants a suitable dose of cod liver oil. This, however, presents its difficulties. It is troublesome to administer, it is not always well tolerated, and most of all it may be forgotten. We get around all this by incorporating in the milk by a simple process the concentrate of the Vitamin D. In this way we get the useful substance into the milk leaving the oil to be used for industrial purposes such as tanning. The milk as fed differs in no way, by odor, taste or appearance, from ordinary milk but contains per quart the Vitamin D of several teaspoonsful of cod liver oil.

Careful studies have been made of the rickets-preventing activity of such Vitamin D milk. You may have heard that the irradiation product which goes by the name of Viosterol has not the same activity per unit as cod liver oil has. The unit is measured by a biological assay on rachitic rats and it has been found that in children it takes several times the number of units of Viosterol as it does of cod liver oil to prevent rickets. The Vitamin D concentrate acts unit for unit the same as cod liver oil itself and possibly due to better absorption when finely emulsified in milk it is even more effective. Dr. Barnes of Detroit has recently found that Vitamin D milk furnishing 50 units a day is fully sufficient to prevent rickets in infants. In chickens also where the usual irradiated products have such a low activity that they are not used in practice the concentrate is highly potent. No irradiation products have so far been produced with any essentially better activity in either children or chickens while most of them are distinctly inferior when measured in the commonly accepted units.

The milk is made up to contain 150 units per quart so that a good margin of safety is left for the exceptional cases which may be more refractory and also so that older children may also get a suitable amount in proportion to their increasing body weight. There is much evidence that Vitamin D has a marked effect on tooth conditions in children of school age. This subject is under intense investigation at the present time and all indications are that dental caries is, in part at least, controlled by the supply of Vitamin D in the body.

It is frequently asked whether, by insuring an adequate supply of Vitamin D, we are not running the risk of overdosage. This question must be answered carefully in view of certain laboratory findings and their interpretations. We can, of course, get harmful overdoses of any food or drink, of any drug or physical health measure such as exercise or sunbathing. It has been shown in the laboratory that overdoses of Vitamin D in the form of irradiated ergosterol can be poisonous but to produce symptoms it is necessary to give, according to conditions, at least, 1,000 to 4,000 times the rickets-preventing dose. If we take just a few times too much of any food or drug or say, sunlight exposure, we usually suffer and sometimes very severely so that the toxicity of Vitamin D is less than of most other things we might compare it with. To get toxic effects from Vitamin D milk it would take hundreds, if not thousands, of quarts a day. We see, therefore, that there is no immediate practical problem here. The reason why these effects of huge doses of Vitamin D are still being studied in certain laboratories is not in relation to nutrition or public health but rather to throw light on certain problems concerning

mechanisms of pathological change in tissues. I mention this because several recent scientific discussions have in this respect been entirely misinterpreted in several press reports. It is possible that during the early days before the potency of Viosterol was recognized there were a few cases of moderate overdosage but even these accounts are largely questioned by competent authorities.

To demonstrate that with our Vitamin D milk there is not even a remote chance of overdosage we will state that the concentrate never gets into the hands of dairies in a form that might turn out to be dangerous. It is diluted to such an extent that one could drink a bottle of it without coming near the toxic range as established in the laboratory. All preparations are also carefully controlled by biological assay.

The assaying, however, is not done to prevent overdosage but to insure a sufficient amount in the milk supply. All batches of concentrate are checked by at least two laboratories and besides this the prepared milk is again assayed. For this purpose arrangements have been made with laboratories mostly in state universities or agricultural experiment stations in each state where the milk is on the market. The samples are secured usually by the regular milk inspection authorities and forwarded to the proper laboratory. The results are then sent to the state or city board of health. Several states now require that the number of units per quart be stated on the bottle cap and enforce this under the regular state food laws. In other cases the local health boards supervise the milk potency. We believe this assay control to be of very great importance. There are several kinds of reliable Vitamin D milks on the market now and there will probably be many attempts at spurious imitation. The milk does not differ in appearance or taste from ordinary milk and there are no simple chemical tests. Several states are now instituting official Vitamin D testing laboratories planning to take over the testing themselves. This is a new departure in food control and probably the largest volume of work will be in testing animal feeds but the most important part of it is the testing of Vitamin D milk. The countrywide distribution and proper control of Vitamin D milk promises to deal successfully with one of the most frequent diseases of infants and rid the growing generation of all the handicaps resulting from abnormal bone formation in infancy. This plan is not Utopian. It is probably not as difficult to carry out as was the introduction of widespread pasteurization of milk supply which is now a matter of history and has certainly vindicated the hopes of its early proponents.

STATE BOARD OF HEALTH

TREATMENT OF VENEREAL DISEASES

MEMORANDUM:

If funds permit, the Executive Secretary is authorized to make arrangements for the payment of physicians undertaking the treatment of indigent venereal disease patients under the following conditions:

1. The case shall have been reported in accordance with the Statute.
2. Permission to treat the case on the charge of the State Board of Health shall be asked for and obtained.
3. The preference of the practitioner respecting medical preparation to be used, (arsenic, mercury, bismuth, etc.) shall have been expressed.
4. Record of treatments given shall have been noted on the case report card obtained from the State Board of Health, together with reports of Laboratory examinations.
5. On presentation of the account accompanied by the above referred to case report card showing dates, quantities and form of treatment, payment is authorized on the scale below indicated.

Intravenous injections	$1.00
Intra-muscular injections	.50
Urethritis treatments (including medicines)	.50

6. If, after the completion of one course of anti-syphilitic treatment and the payment therefor, it becomes desirable to give more treatments, the case report card will on request be returned to the practitioner with the authorization for the continuation of treatment.
7. This arrangement shall not apply in respect of patients living within a radius of ten miles from a venereal disease clinic carried on by the State Board.

Approved December 26, 1933.
SIGNED:
A. C. JOST, M. D.,
Executive Secretary.

Dear Doctor:

The following procedure regarding tuberculin testing and x-ray study of school children is in compliance with resolution of the State Medical Society, adopted September 26, 1933. Explanation of these cards is as follows:

CONSENT CARD—5x8: Item #1 is to be filled in by parent, guardian or teacher. It is then submitted to parent or guardian for "consent" to have the tuberculin test given, or for refusal of the test. After #1 is signed (consent given) the card is brought to you (family physician) for your approval, and to be signed under #2. In case you do the testing, retain the card until the test is completed and the results recorded by you under #4. If the test is positive, use the 4x6 card for referring for x-ray. If test is negative, the line under #2 for x-ray reference is to be left blank, following which the card is returned by you to parent, guardian or school. In the event that you do not prefer to give the test, kindly fill in #2 and return. Item #3 is to be filled in by anyone having definite knowledge of the applicant's having been in contact with a known case of tuberculosis. Item #5 is for statistical purposes and is to be filled in by Brandywine Sanatorium.

The two, 4x6 cards are self-explanatory. One is for recording and reporting to you (if you did not give the test) the results of the tuberculin test and the other is authorization for x-ray study.

Cases who are able to pay are to be referred by you to a Delaware Roentgenologist of your choice for x-ray study. Brandywine Sanatorium will x-ray only those cases referred by you who are indigent as indicated under item #2 on the 5x8 card.

Additional notices will be mailed to all physicians in the community each time where tuberculin testing is to be done, giving date and place of testing.

Very sincerely yours,
Brandywine Sanatorium
Medical Advisory Committee
Delaware Anti-Tuberculosis Society

Dec. 28, 1933.

OBITUARY

WILLIAM H. HANCKER, M. D.

Dr. William H. Hancker, superintendent emeritus of the Delaware State Hospital at Farnhurst, died on December 29, 1933 at his apartment at the Delaware State Hospital, from a complication of diseases.

Dr. Hancker was born in Philadelphia in 1850, and was educated at Girard College, graduating in 1866. He was an apprentice in pharmacy at the Northern Dispensary of Philadelphia under Dr. D. D. Richardson, and graduated from the Philadelphia College of Pharmacy in 1870. He graduated from the Jefferson Medical College in 1873, and became the assistant of Dr. Richardson in the insane department of the Philadelphia Hospital and remained there until 1875.

He was appointed assistant superintendent of the Northern Hospital for the Insane at Winnebago, Wis., in 1875, and remained there until 1882, when he resigned and entered upon the practice of medicine. He was recalled to the Winnebago Hospital and served as assistant superintendent until 1890, when he accepted the appointment of assistant superintendent of the State Hospital at Farnhurst. He served as assistant superintendent for two years, and immediately after the resignation of Dr. D. D. Richardson, his stepfather, Dr. Hancker was appointed as superintendent of the Delaware State Hospital. On April 1, 1926, Dr. Hancker resigned as superintendent because of ill health. Since then he has served as superintendent emeritus on the staff of the hospital.

Dr. Hancker was a member of many medical fraternities, including the American Psychiatric Association (life member), American Medical Association, Medical Society of Delaware, and the New Castle County Medical Society. He was also a member of the Wilmington Whist Club, and of the Masonic fraternity.

His wife, Jennie Hancker, died on January 22, 1930. His sister, Miss Clara Richardson, died in September 1932. Dr. Hancker does not have any near relatives anywhere.

The funeral was held at Dr. Tarumianz's home at Farnhurst on January 2, 1934, with interment in Philadelphia.

1789—MEDICAL SOCIETY OF DELAWARE—1934

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NEW CASTLE COUNTY MEDICAL SOCIETY—1934

Meets the Third Tuesday

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G. BURTON PEARSON, *Vice-President*, Newark.
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Necrology Committee: J. W. Butler, Earl Bell, H. L. Heitefuss.

Nomination Committee: J. D. Niles, George W. Vaughan, E. R. Mayerberg.

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Credit Bureau Committee: Paul R. Smith, I. Lewis Chipman, B. M. Allen.

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Medical Economics Committee: W. Edwin Bird, Ira Burns, W. H. Speer, A. J. Strikol, Joseph P. Wales.

DELAWARE ACADEMY OF MEDICINE—1934

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KENT COUNTY MEDICAL SOCIETY—1934

Meets the First Wednesday

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JOSEPH BRINGHURST, *Secretary-Treasurer*, Felton.

Delegates: O. V. James, C. J. Prickett, I. J. MacCollum.

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Delegate to A. D. A.: P. A. Traynor, Wilmington; Alternate: Roy Corley, Smyrna.

SUSSEX COUNTY MEDICAL SOCIETY—1934

Meets the Second Thursday

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Program Committee: Bruce Barnes, James Beebe, K. J. Hocker.

Nomination Committee: R. C. Beebe, G. E. James, U. W. Hocker.

Historian: Catherine Gray.

Delaware Pharmaceutical Society—1934

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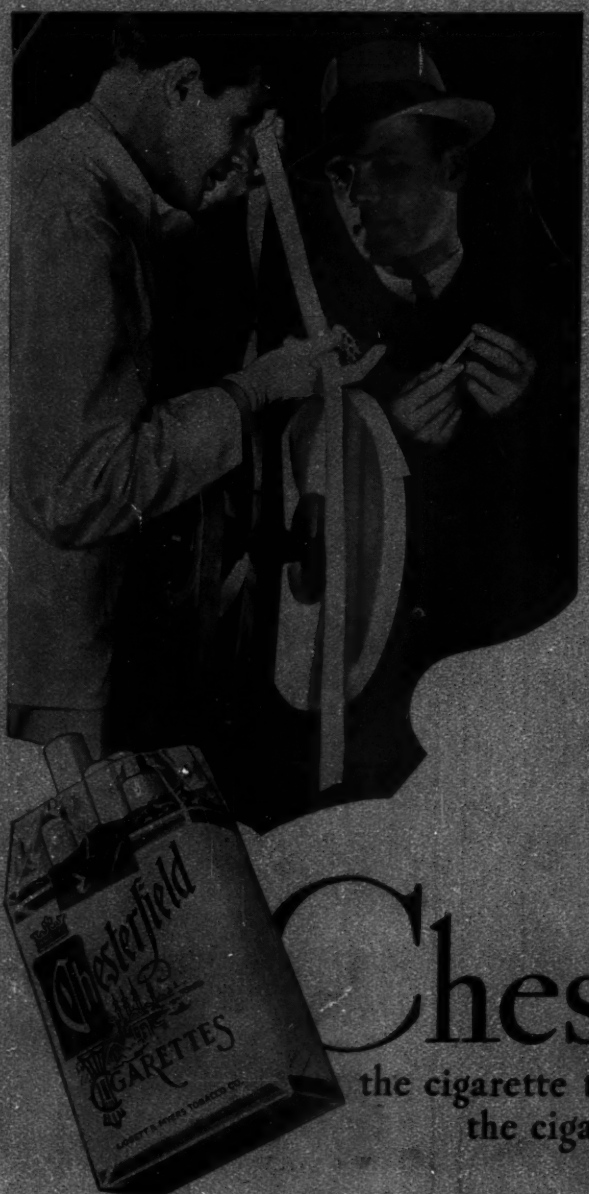
6 about Cigarettes



As to the cigarette paper on Chesterfields

THIS reel of cigarette paper is sufficient to make 42,000 Chesterfield Cigarettes. It is of the finest manufacture.

In texture, in burning quality, in purity, it is as good as money can buy.

Cut open a Chesterfield cigarette. Remove the tobacco and hold the paper up to the light. If you know about paper, you will at once note the uniform texture—no holes, no light and dark places. Note also its dead white color.

If the paper is made right—that is, uniform—the cigarette will burn more evenly. If the paper is made right—there will be no taste to it and there will be no odor from the burning paper.

Other manufacturers use good cigarette paper; but there is no better paper made than that used on Chesterfields. You can count on that!

Chesterfield

the cigarette that's MILDER
the cigarette that TASTES BETTER